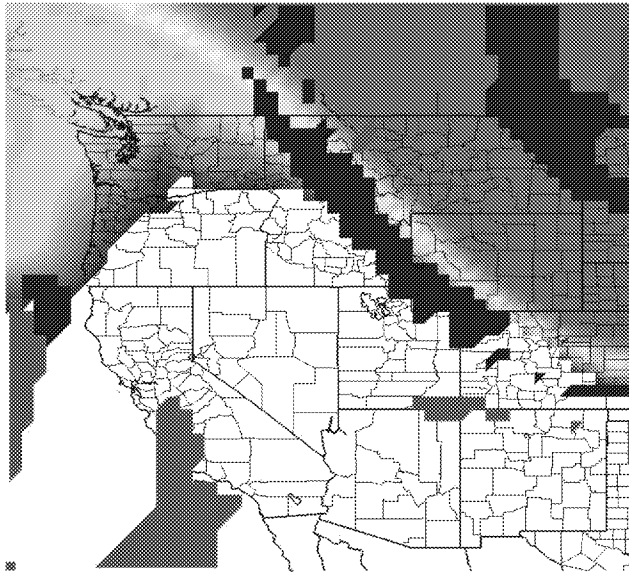


Message

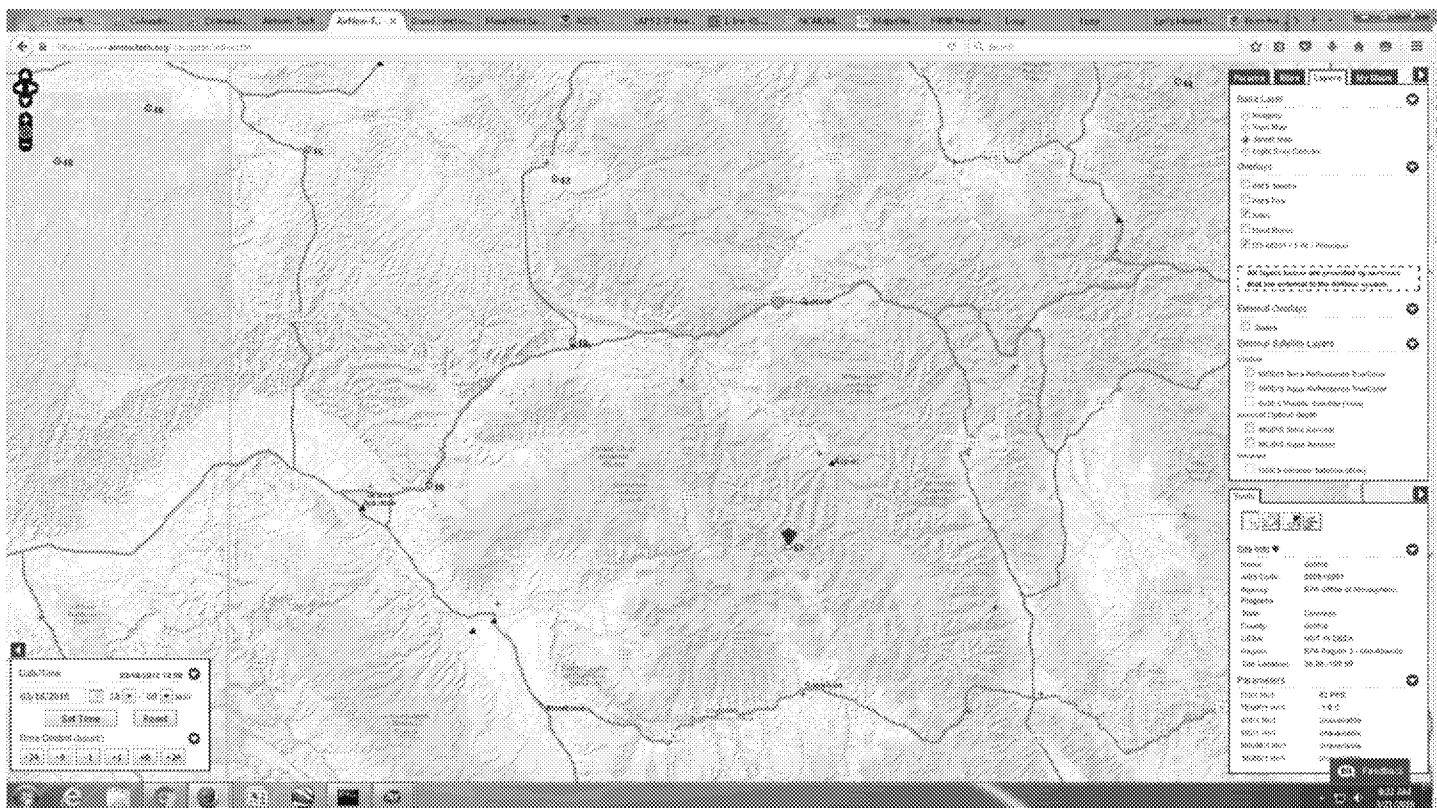
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**From:** Landes - CDPHE, Scott [scott.landes@state.co.us]  
**Sent:** 3/21/2016 2:40:35 PM  
**To:** Patrick Reddy [Personal Matters / Ex. 6]  
**CC:** Irina Petropavlovskikh - NOAA Affiliate [irina.petro@noaa.gov]; Brad Pierce - NOAA Federal [brad.pierce@noaa.gov]; Audra McClure - NOAA Affiliate [Audra.mcclure@noaa.gov]; Tonnesen, Gail [Tonnesen.Gail@epa.gov]; Andrew Langford-NOAA Federal [andrew.o.langford@noaa.gov]; Payton, Richard [Payton.Richard@epa.gov]; Gordon Pierce - CDPHE [gordon.pierce@state.co.us]  
**Subject:** Re: Stratospheric Intrusion on March 20

Actually if you look back to the 18th (Friday) you can see some evidence of a stratospheric intrusion in Gothic as well. The 1st graphic below (18Z Friday) shows low RH with high IPV at 600 mb. A few hours later on Friday you can see from the 2nd graphic the elevated surface ozone in Gothic. There were a number of shortwaves that crossed the state Friday thru Sunday morning which apparently brought at least a few tropospheric folds.



Relative\_humidity - Color-Shaded Plan View 2016-03-18 18:00:00Z  
IPV - Color-Shaded Plan View 2016-03-18 18:00:00Z  
Total\_ozone - Color-Shaded Plan View 2016-03-18 18:00:00Z



On Mon, Mar 21, 2016 at 8:12 AM, Patrick Reddy < **Personal Matters / Ex. 6** > wrote:  
Hi all,

It does look like there was an intrusion on the 20th. The following IDEA stratospheric intrusion forecast product from March 19 captures this event and shows a narrow streamer of high O3 aloft moving through Wyoming on its way to Colorado.

[http://cimss.ssec.wisc.edu/idea-i/USozone/index.php?action=view\\_animation&params=sensor,node,date&param\\_values=CrIS,Descend,20160319](http://cimss.ssec.wisc.edu/idea-i/USozone/index.php?action=view_animation&params=sensor,node,date&param_values=CrIS,Descend,20160319)

Scott Landes at CDPHE has also completed an analysis that shows high IPV and low RH aloft. The CDPHE MInes Peak site had O3 at about 65 to 70 ppb. Gothic showed no signs of an intrusion, and impacts were minimal on the plains.

Pat

--

Scott J Landes  
Air Quality Meteorologist  
Modeling, Meteorology and Emissions Inventory Unit  
Technical Services Program



303-692-3255  
[scott.landes@state.co.us](mailto:scott.landes@state.co.us)